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| RAMAN, USHA | | | | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/875,403

Applicant(s)

GUTTA ET AL.

Examiner

USHA RAMAN

Art Unit

2623

Period for Reply -- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 16 October 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 6, 13, 15, 16, 19, 21, 22, 25 and 26 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 6, 13, 15, 16, 19, 21, 22, 25 and 26 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)
- 4) ☐ Interview Summary (PTO-413)
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____
- Paper No(s)/Mail Date _____

Continued Examination Under 37 CFR 1.114

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on October 16th, 2007 has been entered.

Response to Arguments

2. Applicant's arguments filed October 16th, 2007 have been fully considered but they are not persuasive.

Applicant's arguments stating that, "one of ordinary skill in the art would not look to combine the competitive selection feature of Hendricks with the cooperative feature of Vamparys to alter the recommendation determination process to select a higher ranked recommendation" and that, "[Vamparys] provides no teaching to select one recommendation over another as each filtering method as its own advantages for the type of material being evaluated" have been noted, however are not persuasive. As Vamparys discloses, certain types of filtering engines are optimized for certain categories. For example, the collaborative filtering engine would provide better recommendations on categories such as movies, while the content filtering provides better recommendations on categories such as sports. However, in the scenario presented by Jacobi, where program category is not known, a recommendation can be generated by all three engines to determine

whether or not a program should be recommended. In such a case, it would be obvious to drop recommendation from the filtering engine the lowest score while aggregating the results. Moreover, Vamparys also discloses that filtering engine 710 can be a more general social filtering engine, in which case, the filtering engines 708 and 710 are based on social filtering models and therefore may give competitive selection with respect to each other as well.

Claims 6, 15 and 19 appear to recite "means plus function" language. Applicant is requested to point structural elements from the disclosure that is intended to characterize the various "means" (beside the "means for receiving a record") from the claims as applicant has stated that, "the steps are not limited to computer instruction" in order to properly establish the scope of the claims.

For the reasons stated above, the rejection is sustained.

Claim Rejections - 35 USC § 101

3. 35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

4. Claims 15, 16, and 21-22 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

With respect to claims 15, 16, and 21-22 the claimed invention taken as a whole is directed to a mere program listing, i.e., to only its description or expression, is it descriptive material per se and hence nonstatutory. The computer program is not claimed in a process where the computer is executing the computer program's instructions, and therefore cannot be treated as a process claim. The claims recite

"A computer program product in a computer readable medium", where the preamble is generally not accorded any patentable weight where the body of the claim does not depend on the preamble for completeness but, instead, the process steps or structural limitations are able to stand alone. See *In re Hirao*, 535 F.2d 67, 190 USPQ 15 (CCPA 1976) and *Kropa v. Robie*, 187 F.2d 150, 152, 88 USPQ 478, 481 (CCPA 1951). The body of the claim reciting the steps of the computer program product do not depend on the preamble elements of "computer readable memory medium" for completeness and therefore the claim merely recites the computer program steps. Since the computer program is merely a set of instructions capable of being executed by a computer, the computer program itself is not a process. The claim may however be treated as a product claim when the computer program steps are recited in conjunction with a physical structure such as the "computer readable memory medium", such that the body of the claim depends on the physical structure for completeness. The following language is suggested for compliance with 35 U.S.C. 101.

- "computer readable medium" encoded with _____
 - a. "a computer program",
 - b. "software",
 - c. "computer executable instructions"
 - d. "instructions capable of being executed by a computer"
- "a computer readable medium" _____ "computer program"
 - a. storing a

- b. embodied with a
- c. encoded with a
- d. having a stored
- e. having an encoded

Applicant is advised to review the "Interim Guidelines for Examination of Patent Applications for additional Patent Subject Matter Eligibility" for additional information.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1, 6 and 15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 6 recites the preamble "A computer readable medium storing a computer program, which when loaded into a computer system causes the computer system to generate to generate a recommendation of a program, by having the computer system represent". As understood by the examiner, "represent" merely appear to suggest a designation without any functional language with it. Hence the scope of "represent" within the context of the claim generally appears unclear.

Claim 15 recites various "represent means" plus function language. As understood by the examiner, "represent" merely appear to suggest a designation

Art Unit: 2623

without any functional language with it. Hence the scope of "represent" within the context of the claim generally appears unclear.

Claim Rejections - 35 USC § 103

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

8. Claims 6, 13, 15, 16, 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vamparys (WO 01/15449) in view of Jacobi et al. (US Pat. 6,064,980) and Hendricks et al. (US Pat. 5,798,785)

With regards to claims 6, 13, 15, 16 and 19, Vamparys discloses a computer implemented method for generating a recommendation of a program (see page 5, lines 2-4), said method comprising the steps of:

Receiving a record corresponding to the program, the record including a program category indication (see page 7, lines 21-25, page 9, lines 8-11, 18-21);

Generating a first recommendation of a program by a first recommendation engine (i.e. first classifier module), and generating a second recommendation of a program by a second recommendation engine (i.e. a second classifier module), wherein the first classifier module trained with a first program category and the second classifier module trained with a second program category (see page 15, lines 22-25, page 16, lines 1-2, 5-11 "a filtering engine can be better adapted one

content category than another content category"). Vamparys discloses the step including a matching one or more program characteristics information (including keywords, program title, ratings, category etc.) against viewer characteristics in order to generate recommendations. See page 17, line 25-page 19, line 1. Vamparys is silent on the step of generating the first and second recommendations when the record program category indication fails to indicate at least one of a plurality of programming categories.

Jacobi et al. presents a scenario in a recommendation system, wherein new categories of items become available over time, however is absent from the being categorized in the recommendation service. See column 3, lines 2-10. Examiner notes that, because Vamparys indexing a plurality of characteristics of a program in addition to categories (such as keywords), the first and second recommendation engines are capable of generating recommendations in the absence of an unidentified new category in the recommender system. See page 17, line 25- page 18, line 15. Vamparys further shows associating weights with the plurality of recommender engines (see figure 7, 712 and 714), however is silent on the step of selecting a higher of the two weighted (ranking) recommendation. Hendricks discloses the method of comparing weighted recommendations against a minimum weighted index, and eliminating recommendations that falls below the minimum weight. See Hendricks: column 32, lines 57-62.

It would have been obvious to modify the system of Vamparys by continuing to generate recommendation on new items comprising new categories that fail to be

identified at the recommender engine by using other pre-existing program characteristics, such as keywords, when the program category indication fails to indicate at least one of a plurality of existing categories, upon generating a first and second recommendations that are ranked with weighted coefficients and further modifying the system in view of Hendricks by eliminating a first or second recommendation when it falls below the minimum weight and keeping the recommendation that is above the minimum weight, thereby selecting the recommendation that has the higher ranking. The motivation is to enable recommendation of new programs based on viewer characteristics and other known program characteristics, such that programs cater more to viewer interests are presented to the user.

With further regards to claim 16 and 19, in accordance with the modified system, Vamparys discloses including category data as part of program record, the record therefore contains a program category indication, and when a new item of non-service category is present, the new item may not have any identifiable categories in the recommender system (see Jacobi: column 3, lines 2-10).

With regards to claim 22, the above modified system in selecting the highest ranking data, comprises the method of selecting between the first and second generated recommendations (see claim 6 above).

9. Claims 21, 25 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Vamparys (WO 01/15449) in view of Jacobi et al. (US Pat. 6,064,980) and

Hendricks (US Pat. 5,798,785) et al. as applied to claims 15, 6, and 13, respectively above, and further in view of Applicant's Admitted prior art ("AAPA")

Claims 21, 25 and 26, recite the computer implemented method, wherein one of the first and second classifier modules is a concept learning based classifier and the other of the modules is a classifier for providing a probabilistic calculation. As discussed above, Vamparys in view of Jacobi and Hendricks anticipate each and every limitation of claims 6, 13 and 15, but fail to specifically recite the limitations of Claim 21. However, within the same field of endeavor, AAPA discloses the exact limitations and admits them as prior art (see Disclosure, page 6, lines. 1-13 & 18-21). Accordingly, it would have been obvious to one having ordinary skill in this art at the time of Applicant's invention to combine the teachings of Hendricks and AAPA to provide a system, which incorporates well-known learning techniques.

Conclusion

10. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Rao (US Pat. 6,751,614) discloses a method of using classification methods based on document characteristics and user preferences as well as user feedback in determining relevant documents to users.
11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Usha Raman whose telephone number is (571) 272-7380. The examiner can normally be reached on Mon-Fri: 9am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Kelley can be reached on (571) 272-7331. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Chris Kelley/
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